## U.S. Department of the Interior • U.S. Geological Survey

# MINERAL INDUSTRY SURVEYS

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### TUNGSTEN IN AUGUST 1996

Based upon net production of intermediate tungsten products, including metal powder and tungsten carbide powder produced from hydrogen reduced metal powder, the U.S. industrial tungsten activity for August 1996 decreased about 39% compared with that of July 1996, according to the U.S. Geological Survey. U.S. industrial tungsten activity for the first 8 months of 1996 was 17% lower than for the same period of 1995. Reported consumption of tungsten in all end-use products through August 1996 decreased by approximately 27% compared with reported consumption of tungsten through the same period of 1995.

July 1996 trade data are included in this issue. Trade data for August 1996 will appear in a subsequent issue.

The combined wolframite and scheelite prices from <u>Metal</u> Bulletin were:

Low: \$45/mtu WO<sub>3</sub> (\$40.82/stu WO<sub>3</sub>), September 1-30, 1996 High: \$55/mtu WO<sub>3</sub> (\$49.90/stu WO<sub>3</sub>), September 1-30, 1996

### **Update**

Most of Russia's tungsten mines have closed and will be unable to reopen until tungsten prices are higher. On the other hand, most of Russia's stockpile sales reportedly have been uncontrolled, and tungsten material has been sold at lower and lower price levels. Hence, Russia's mines have had to compete with their own State stockpile.<sup>1</sup>

<sup>1</sup>Metal Bulletin, Oct. 14, 1996, p. 15.

# TABLE 1 U.S. SALIENT TUNGSTEN STATISTICS 1/

(Metric tons, tungsten content)

		Concentrate			In		
		Imports	Stocks,	Reported	Net		Stocks,
	Reported	for	end of	scrap	produc-	Reported	end of
Period	consumption	consumption	period 2/	consumption	tion 3/	consumption 4/	period 5/
1995: p/							
January-December	6,320	4,180	631	2,350	8,190	11,900	1,290
1996:	_						
January	479	310	486	261	718	993	1,220
February	475	162	438	186	933	1,000	1,360
March	504	155	559	223	845	957	1,440
April	580	148	694	236	787	973	1,510
May	- 415 r/	403	654 r/	200 r/	303 r	/ 1,070 r/	1,550 r/
June	551 r/	365	721 r/	199 r/	473 r	/ 947 r/	1,560 r/
July	506 r/	383	633 r/	273 r/	866 r	/ 935 r/	1,780 r/
August	415	NA	695	250	525	1,110	1,640
Total	3,930	1,930	XX	1,830	5,450	7,980	XX

- p/ Preliminary. r/ Revised. NA Not available. XX Not applicable.
- 1/ Data are rounded to three significant digits; may not add to totals shown.
- 2/ Reported by consumers.
- 3/ Net production of tungsten metal powder, tungsten carbide powder, chemicals, and other products.
- 4/ Includes data on tungsten carbide powder from secondary sources.
- 5/ Reported by producers.

TABLE 2
U.S. PRODUCTION, CONSUMPTION, AND STOCKS OF AMMONIUM PARATUNGSTATE, BY MONTH 1/

(Metric tons, tungsten content)

Period	Production	Consumption	Stocks, end of period 2/
1995: p/			
January-December	2,580 3/	7,690	338
1996:			
January	565	598	370
February	W	630	366
March	556	782	357
April	W	742	319
May	W	619 r/	299 r/
June	W	531 r/	391 r/
July	677	639 r/	W
August	592	673	576
Total	2,390	5,210	XX

p/ Preliminary.  $\,$ r/ Revised.  $\,$ W Withheld to avoid disclosing company proprietary data.  $\,$ XX Not applicable.

- 1/ Data are rounded to three significant digits; may not add to totals shown.
- 2/ Producers and consumers.
- 3/ Excludes seven months of withheld data.

 $\label{eq:table 3} \textbf{U.S. PRODUCTION AND STOCKS OF TUNGSTEN PRODUCTS} \ 1/$ 

(Metric tons, tungsten content)

	Net	production 2/			
		1996		Stocks at end	of period
	-		Year		1996
Product	1995 p/	August	to date	1995 p/	August
Metal powder	2,910	197	2,850	818	997
Tungsten carbide powder	_				
(made from metal powder)	5,280	328	2,600	348	493
Cast and crystalline	=				
carbide powder; other	W			$\mathbf{W}$	W
Chemicals	W	W	W	126	145
Total	8,190	525	5,450	1,290	1,640

p/ Preliminary. W Withheld to avoid disclosing company proprietary data.

 ${\it TABLE~4}\\ {\it U.S.~REPORTED~CONSUMPTION,~BY~END~USE,~AND~CONSUMER~STOCKS~OF~TUNGSTEN~PRODUCTS~IN~AUGUST~1996~1/2}}$ 

(Metric tons, tungsten content)

		Tungsten	Tungsten	Scheelite		Other		Total
	Ferro-	metal	carbide	(natural,	Tungsten	tungsten		year to
End Use	tungsten	powder	powder	synthetic)	scrap 2/	materials 3/	Total	date
Steel:								
Stainless and heat-resisting	W		W		W		W	W
Alloy	2						2	13
Tool	19						19	121
Total	21		W		W		21	134
Superalloys		W	2		14	3	19	147
Alloys (excludes steels and superalloys):	_							
Cutting and wear-resistant materials		W	531		W	171	702	4,540
Other alloys 4/		W	W		W		W	1
Mill products made from metal powder		W					W	360
Chemical and ceramic uses		W	W			W	W	W
Miscellaneous and unspecified	4	32	331		W	W	367	2,800
Total	25	32	864 5/		14	174	1,110	XX
Total consumption, year to date	223	501	6,940 5/		120	198		7,980
Stocks, August 31, 1996	38	39	491 5/	1	27	1,500	2,100	XX

W Withheld to avoid disclosing company proprietary data.  $\,$  XX Not applicable.

<sup>1/</sup> Data are rounded to three significant digits; may not add to totals shown.

<sup>2/</sup> Gross production less quantity used to make other products in table.

 $<sup>1/\,\</sup>mbox{Data}$  are rounded to three significant digits; may not add to totals shown.

 $<sup>2/\</sup> Does\ not\ include\ that\ used\ in\ making\ primary\ tungsten\ products.$ 

<sup>3/</sup> Includes tungsten chemicals.

<sup>4/</sup> Includes welding and hard-facing rods and materials and nonferrous alloys.

<sup>5/</sup> Based on reported consumption plus information from secondary sources; includes estimates.

 $\begin{tabular}{ll} TABLE & 5 \\ U.S. & IMPORTS FOR CONSUMPTION OF TUNGSTEN, BY COUNTRY 1/ \\ \end{tabular}$ 

(Metric tons, tungsten content)

	Con-			Lumps,				Total
Period and country	cen-	Ammonium	Ferro-	grains,	Tungsten			year to
of origin	trate	tungstates	tungsten	powders	carbide	Other e/ 2/	Total	date
1995:		_	_					
Total	4,180	1,290	652	312	476	3,260	10,200	XX
1996:								
May	403	73	80	108	21	280	964	XX
June	365	63	15	16	18	249	726	XX
July:								
Australia								3
Austria						4	4	12
Belgium				(3/)			(3/)	2
Bolivia	35						35	312
Canada				1	3		4	32
China		111	12	3	5	310	441	2,540
Czech Republic								9
Germany		(3/)		(3/)	15	(3/)	15	135
Hong Kong						38	38	191
Hungary						(3/)	(3/)	4
Israel				1		1	2	7
Japan				3	(3/)	6	9	53
Kazakstan	46						46	126
Korea, Republic of								6
Mexico					(3/)	(3/)	(3/)	45
Netherlands						(3/)	(3/)	54
Peru							10	249
Portugal							179	331
Russia	89		32	(3/)		20	141	858
Sweden		19		3		(3/)	22	40
Switzerland					(3/)	(3/)	(3/)	2
Thailand								11
United Kingdom	24					1	25	375
Uzbekistan								30
Total	383	130	43	12	22	381	972	XX
Total, year to date	1,930	848	353	236	185	1,870	XX	5,420

e/ Tungsten content estimated in part. XX Not applicable.

Note: Imports of waste and scrap in July 1996 totaled 179 metric tons, tungsten content.

Source: Bureau of the Census.

 $<sup>1/\,\</sup>mbox{Data}$  are rounded to three significant digits; may not add to totals shown.

<sup>2/</sup> Includes calcium, potassium, and sodium tungstates, mixtures and materials in chief value tungsten, tungsten oxide, tungstic acid, unwrought ingots and shot, other unwrought tungsten and materials, wrought tungsten, and other tungsten compounds.

<sup>3/</sup> Less than 1/2 unit.

#### 

(Metric tons, tungsten content)

	Con-						Total
Period and country	cen-	Ammonium	Metal	Tungsten			year to
of destination	trate	tungstates	powder e/	carbide	Other e/ 2/	Total	date
1995:							
Total	5	238	484	1,670	369	2,760	XX
1996:							
May	6		35	75	19	136	XX
June	3	17	25	173	34	252	XX
July:							
Argentina			1			1	2
Australia				2		2	11
Austria			(3/)	3		3	21
Belgium				(3/)	2	2	6
Brazil			(3/)		(3/)	(3/)	5
Canada			3	22	4	29	268
China	(3/)			(3/)		(3/)	23
Denmark				1		ĺ	1
France			5	(3/)	1	6	49
Germany			11	16	(3/)	27	299
Guatemala					ĺ	1	1
Honduras							18
Hong Kong			1		(3/)	1	6
India					1	1	9
Ireland				(3/)	(3/)	(3/)	3
Israel				1	(3/)	1	36
Italy				9	(3/)	10	73
Japan			(3/)	1	1	2	103
Korea, Republic of			ĺ	(3/)	1	2	10
Luxembourg				1		1	11
Mexico			(3/)	1	3	4	24
Netherlands	1				(3/)	1	8
Portugal							1
Saudi Arabia					1	1	1
Singapore				(3/)	(3/)	(3/)	15
South Africa				(3/)	(3/)	(3/)	15
Spain			(3/)		1	1	6
Sweden			1	10		11	64
Switzerland				(3/)	(3/)	(3/)	4
Taiwan				1	1	2	33
United Kingdom				9	1	10	84
Venezuela				(3/)		(3/)	2
Total	1		24	78	19	120	XX
Total, year to date	17	66	163	784	185	XX	1,220

e/ Tungsten content estimated in part. XX Not applicable.

Note: Exports of waste and scrap in July 1996 totaled 39 metric tons, tungsten content.

Source: Bureau of the Census.

 $<sup>1/\,\</sup>mbox{Data}$  are rounded to three significant digits; may not add to totals shown.

<sup>2/</sup> Includes calcium, potassium, and sodium tungstates, mixtures and materials in chief value tungsten, tungstic acid, unwrought ingots and shot, other unwrought tungsten and materials, wrought tungsten, and other tungsten compounds.

<sup>3/</sup> Less than 1/2 unit.